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ABSTRACT

Compiled to assist teachers in their quest for free and inexpensive educational materials, this report provides both a practical guide to aid in planning a research strategy and a compilation of resources available free or at low cost to teachers. Teachers in four Virginia elementary schools were surveyed to determine: (1) whether their school system provides all the resources they use in the classroom; (2) whether teachers themselves provide classroom resources either from their personal funds or through their efforts to obtain such resources; (3) whether teachers are comfortable conducting resource searches; and (4) the types of resources teachers provide for their classrooms. Numerous, comprehensive listings of free classroom resources were located, but there were few sources outlining research strategies and tools. To test the usefulness of this compilation of free resources, it was cross-matched with an integrated mini-unit on pollution/the environment to create a unit "enhanced" by related thematic material available free to teachers. Appended materials include the teacher questionnaire; a sample research/reference card; a resource directory card; a comprehensive listing of free classroom resources by subject matter; the integrated mini-unit plan on pollution/environment; tips for an organized, successful search; and 9 figures displaying the survey findings. (Contains 32 references.) (Author/ALF)

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Free Classroom Resources:

Conducting a Successful Search

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Abstract

Compiled to assist teachers in their quest for free and inexpensive educational materials, this report provides both a practical guide to aid in planning a research strategy and a compilation of resources available free or at low cost to teachers. Teachers in four Central Virginia elementary schools were surveyed to determine (1) whether their school system provides all the resources they use in the classroom; (2) whether teachers themselves provide classroom resources either from their personal funds or through their efforts to obtain such resources; (3) whether teachers are comfortable conducting resource searches; and (4) the types of resources teachers provide for their classrooms. My assumption that I would find more sources outlining a research process than free resources was not borne out by my research; I located numerous, comprehensive listings of free classroom resources but few sources outlining research strategies and tools. Finally, to test the usefulness of my compilation of free resources, I cross-matched an integrated mini-unit on pollution/the environment with my compilation of resource listings to create a unit "enhanced" by related thematic material available free to teachers.

Free Classroom Resources:

Conducting a Successful Search

Teachers, who have learned by bitter experience that they must provide classroom resources not available through their school systems often beg, borrow, purchase or conduct exhaustive searches for the materials they feel they need to enhance their own effectiveness and maximize their students' learning. With no money and extremely scarce resources--monetary and otherwise--teachers are so creative and diligent in these endeavors that today's classrooms are filled with a variety of resources which augment those provided by school systems.

Although teachers' salaries are generally acknowledged to be one of the lowest among professions, teaching is the only profession that comes to mind whose members regularly supplement the resources provided by their employers with additional resources obtained either with their own money or through their own efforts. It is imperative, therefore, considering today's worsening economic picture,[1] that the majority of classroom resources teachers identify and obtain be free or + the process of obtaining them easier inexpensive. An economic downturn is likely to decrease the amount of discretionary monies provided to teachers by their school systems and/or parent/teacher organizations.

Where do teachers begin a search for free or inexpensive classroom resources? How much of their personal funds do teachers spend on these resources? I believe the answers to these and other questions can be instructive for pre-service teachers in giving them a clear idea, *inter alia*, of (a) classroom resources available free or at low cost to teachers and (b) the amount of their personal funds in-service teachers spend for the classroom. This report might also be informative for in-service teachers as a means of comparing their own search strategies and out-of-pocket expenses with those of their peers.

Purpose

The purpose of this study is to (a) to survey local elementary teachers and principals to discover the extent to which teachers spend their own funds to obtain classroom resources; (b) to determine how comfortable teachers are with conducting their own research; (c) to locate and compile a comprehensive quick reference list of free and inexpensive classroom resources; (d) to create a list of tips and strategies teachers might utilize to begin a research project; and (e) to cross-match an integrated unit plan with resource listings to create an enhanced unit plan using free resources.

On a more selfish level, my purpose is to discover what I, as a beginning teacher, might expect from a school system in terms of classroom resources as well as what resources are available to me

free or at low cost. I want to "pick the brains" of established teachers to see how they provide extra resources for their classrooms.

Hypothesis

I expect to find that school systems do not provide many of the resources teachers use in their classrooms and that the majority of teachers spend large amounts of their personal funds or inordinate amounts of time to obtain classroom resources, after first attempting to borrow whatever they need from colleagues. I also expect to find that most teachers have had some experience with computerized research tools such as ERIC[2] and VIRGO[3]. I do not expect to find many free or inexpensive classroom resources, but do expect to find a significant amount of literature outlining a research process teachers might follow in conducting searches in general.

Overview

In the upcoming chapters, I will use data obtained from my survey instrument (Appendix A) to discover teachers' views of the sufficiency of the money they receive from their school system for meeting the school system's and their own teaching objectives; amount of money teachers spend on classroom resources; teachers' familiarity with computerized research tools; and the strategies teachers use to obtain classroom resources.

Review of the Literature

According to DuVall and Rueff, "Teachers have always been interested in obtaining and using suitable instructional materials with their students" (1983, p. 1). Although it is generally acknowledged and accepted by educators that, through their own tireless efforts, teachers provide a variety of resources for their classrooms, I found very little in the educational literature to assist an inexperienced teacher planning to embark on a search for resources.

Interestingly, the most comprehensive information on conducting basic research came not from an educational research source but from a public speaking textbook. Lucas (1989) correctly points out that "[f]ew people regard doing research as one of life's great joys. There are, however, ways to make it less tedious and more productive. Learning how to use the library efficiently is one way" (p. 108).

However, a trip to conduct library research can be a daunting experience for even the most dedicated of researchers. Acknowledging this, Faulkner (1985) instructs that "[i]t should be remembered that even a small library will seem like a maze to the average [user]" (p. 5).

Ultimately, however, "the only way to become adept at library research is to do it--and to do it properly. You have four important resources for finding what you need in the library--the librarians,

the card catalogue, the reference department, and computerized research services" (Lucas, 1989, pp. 99-100).

Library personnel are more versed than anyone in what the library has to offer a researcher. But as Faulkner (1985) reports, "[i]t is also unfortunately true that many teachers think librarians are "too busy" to give library orientation. However, the librarian's role is not that of a filing clerk or book checker. The librarian is an educator...." (p. 4). Renzulli and Reis (1985) reinforce this suggestion of using human resources, additionally suggesting consulting college and university catalogs, professional organizations and societies, senior citizens and groups, etc. (pp. 257-258).

So, the first step for a prospective researcher is to familiarize oneself with the library, possibly even taking an orientation tour that might be offered by the library. Following this, and after consultation with the library's human sources, researchers should familiarize themselves with any computerized information systems available.

Wiersma (1986) provides comprehensive information on conducting a computer search, noting that "computer-assisted searches of the literature are available through almost all university libraries," and that "there are numerous advantages to a computer search; two obvious ones are comprehensiveness and speed" (p. 63). Likewise, Lucas notes that "computerized research

can save you hours of work--especially if your . . . topic involves obscure or very specialized information" (1989, p. 107).

Organizing oneself is vitally important to the ultimate success of any search for information.[4] "Because research is a structured process (that is, there are rules for carrying it out), it follows that it is systematic (Tuckman, 1988, p. 12). Lewis and Munn (1987) suggest that, in conducting research, we keep in mind a poem from Rudyard Kipling's The Elephant Child (p. 14):

I keep six honest serving men
Who taught me all I know.
Their names are What and Why and When,
And How and Where and Who.

Lewis and Munn translate this strategy into the following six questions a researcher should ask of him/herself: What information do I want? Why do I want it? When do I need it? How do I collect it? Where can I find it? From whom do I get it? (pp. 15-16). To this end, Renzulli and Reis (1958) also provide information on developing source files of resources (p. 259). Lucas (1989) addresses this issue of search organization to an even greater extent, giving detailed information on developing source files for resources and organizing a search (pp. 109-111).

Several authors emphasize that the rewards of a successfully conducted search are great both in terms of resources found and in terms of recognition. Cruickshank (1990) reports on a study by

Hallinger and Murphy which found that "effective teachers" frequently make use of supplementary materials (p. 30). Cruickshank further reports that, "The public is particularly laudatory of teachers who, without benefit of special resources, overcome seemingly extraordinary obstacles to help their pupils succeed, thus demonstrating that other teachers could make a difference, too, if they tried harder or were more creative (p. 16).

But what are the rewards (in terms of resources discovered) of spending long periods of time in front of a computer terminal? Of the 100+ free resources and listings I discovered, the most comprehensive by far is a group of books (e.g., *Educators Guide to Free Curriculum Materials*) published by Educators Progress Service. This set includes nine guides divided by subject matter and varying in length from 146-647 pages. *Free and Inexpensive Learning Materials* published by George Peabody College for Teachers at Vanderbilt University is another popular source, one that has been published biannually for over 40 years. And, Meadowbrook Press, acting on the assumption that "children, parents, and teachers would respond enthusiastically to a source of free things by mail," annually publishes *Free Stuff for Kids* (1991, p. ii).

But, a successful search for free classroom materials need not be considered an end in itself; teachers might maximize their chances of receiving additional resources by following DuVall and

Rueff's (1983) suggestion that, *inter alia*, after locating usable resources, "dedicated seekers of . . . sources of curriculum materials" have their names placed on the mailing list for Selected U.S. Government Books" (p. 4). One caveat Duvall and Rueff offer and that I endorse is that a teacher-researcher order one copy of the material to check for suitability before ordering in quantities (pp. 4-5). Some of the material which I found was clearly propaganda.

Teachers intending to conduct research might be encouraged that, although there is little in the educational literature dealing specifically with conducting a search for free resources, there is some literature available which outlines a research process that inexperienced researchers might utilize. The key is to use the library.

> "Some [people] regard the library as a sinner regards a church--as a place to be entered only in the most desperate circumstances. Then they . . . discover that the library is not so forbidding after all. You will get most of the materials [you need] from the library. Thus you need to know the basic techniques of doing library research (Lucas, 1989, p. 99).

Design of the Study

My respondents all possess at least a Bachelors degree in education and are employed in the same Central Virginia elementary school system as classroom teachers, resource teachers or instructional coordinators.

I gathered my information through personal discussions with teachers and principals and by having respondents complete a two-page, 19 question survey instrument (Appendix A).

The many-pronged foci of this study required a many-pronged approach: discussions with teachers; completion of survey instruments by teachers; conducting library research to locate (a) free resources, and (b) evidence of a simplified research method; and testing the usefulness of my comprehensive listing (Appendix D) of free resources by cross-matching it with an integrated mini unit plan on pollution/the environment (Appendix E) to create a unit enhanced by the use of resources which can be obtained free or at low cost.

Data were compiled separately for each school in the system and ultimately combined to provide the overall analysis which appears below.

Major findings are summarized in narrative form as well as graphically in Figures 1 through 9. Findings, like the survey instrument, are grouped in three categories: availability of resources, conducting research and resource sources.

Findings and Analysis

Availability Of Resources

I had expected to find that school systems do not provide many of the resources teachers use in their classrooms. Not surprisingly, 97% of the teachers surveyed said that their school system does not provide all the resources they use in the classroom. When asked whether the resources provided by the school system are sufficient for them to meet all of the school system's expectations of them, only 15% of teachers responded in the affirmative, while 45% believe these resources are sufficient for them to meet most of the school system's expectations, and 40% think they can only meet some of the school system's expectations of them with the funds provided by the system.

Interestingly, only 7.5% of teachers believe the resources provided by their school system are sufficient for them to attain all of their personal educational objectives, while 45% say these resources are sufficient for them to attain most, and 47.5% say they can only meet some of their personal educational objectives with the money provided by the school system. Apparently teachers have much higher expectations of themselves than do their school systems and believe they would be able to achieve more if they are provided with additional classroom resources.

My belief that the majority of teachers spend large amounts of their personal funds to obtain classroom resources was

confirmed. Over 97% of the teachers surveyed reported spending some of their personal funds to purchase classroom resources. Last year, the average amount of their personal funds teachers spent on classroom resources was over $250.00.

Only 20% of teachers spent less than $50 and only 5% spent between $50 and $99 of their own money on classroom resources. Those spending larger amounts include $100-$199 (20%), $200-$299 (23%), $300-$399 (5%), $500-$599 (7%), and 5% of teachers report spending over $600 of their personal funds on classroom resources (Figure 1).

A comparison of the amount of their personal funds teachers spent for the past two years reveals that 37.5% spent more, 22% spent less, and 27.5% spent approximately the same amount of their personal funds both years.

Conducting Research

Only 37.5% of teachers have conducted their own search for free educational resources.

I expected to discover that most teachers have had some experience with computerized research tools, specifically ERIC (Figure 2) and VIRGO (Figure 3). However, I was quite surprised to discover that 58% of my respondents have not used ERIC and 80% have not used VIRGO.

As a matter of fact, only 17.5% of teachers report being very confident in their ability to locate resources through library

research, while 52.5% of teachers are moderately confident and almost a third of the teachers surveyed (27.5%) are not at all confident in their ability to locate resources through library research (Figure 4).

The majority of teachers (47.5 %) report feeling only moderately comfortable using computerized research tools, while 30% are not at all comfortable using such tools, and only 20% are very comfortable using computerized research tools (Figure 5).

When asked what they feel they would need in order to be more comfortable conducting their own research or using computerized library resources, 21% of the teachers reported they need more time and 51% feel they need training and/or practice, while 2.5% would like to have access near their classroom and an equal number reported that what would make them more comfortable is having someone else to do the research for them (Figure 6).

Resource Sources

Finally, I had expected to find that, before purchasing additional classroom resources, teachers first attempt to borrow whatever they need from their colleagues. Quite surprisingly, I found that almost a third of teachers (32.5%) would begin a search for resources in a store, catalog or journal. Another 22.5% would begin a search in the library. Interestingly, only 20% of teachers would begin a search for resources by asking other school

personnel, including peers or team members (81%), instructional coordinators (13%), or principals (6%). At least 5% of teachers reported they would not know where to begin a search for resources and 2.5% reported they would not take the time to search for free resources (Figure 7).

The methods teachers most frequently use to obtain extra resources for their classrooms are outright purchase (41.5%), a combination of purchase and borrowing (32.5), borrowing only (12.5%), journals (5%), or donations (2.5%). Other strategies used include sharing, using visitors and the library (Figure 8). The resources teachers report they obtain most often for their classrooms through means other than purchase are books, maps and charts, food, paper, films, magazines, math manipulatives and pictures.

While the list of items teachers most frequently purchase for their classrooms is too comprehensive to list here, the items that appeared with most regularity include food, reinforcers, rewards and stickers, paper, pencils and pens (Figure 9).

Summary of Results

It was generally agreed by the teachers I surveyed that all of the resources they feel they need to attain their personal educational goals and to meet the school system's expectations of them are not provided by their school system. This was not surprising.

What was most surprising was my finding that the majority of teachers do not begin a search for resources by asking other school personnel. One principal asked me whether teachers exhaust school system funding sources before spending their personal funds on classroom resources. Unfortunately, a question addressing this issue was not included on my survey instrument. In one case, however, a teacher who spent over between $800 and $1,000 on classroom resources mentioned that s/he would not take the time to search for free resources before spending personal funds.

Another surprising finding was teachers' unfamiliarity with computerized information systems. To reiterate, 80% of teachers have no VIRGO experience and 58% have no ERIC experience.

Summary and Conclusions

It is an unfortunate myth about education that teachers' "short" workday allows them time to conduct searches for classroom resources. Few in-service teachers have the time necessary to locate listings of free resources or to search out the individual resources contained in such listings. Even if both the above conditions are met, teachers might not necessarily possess a workable research strategy. Therefore, one of my intentions was to create a list of research tips and strategies to aid teachers in conducting research (Table 1).

As previously mentioned, a visit to today's library can be a daunting experience for even the most research-conscious, computer-literate of teachers. I believe, therefore, that the above findings regarding teachers' comfort level with computerized research tools and lack of familiarity with such tools might be instructive for school systems as well as the institutions of higher education located near schools. If teachers are to become more familiar with conducting their own research, they must become familiar with computerized information search tools. One professor told me in dismay after I revealed the number of teachers who are unfamiliar with ERIC and VIRGO, "But, we offer that training to them every year." Simply offering courses which teachers must attend at an outside location on their own time, is not, in my view, demonstrating an adequate commitment to

assisting teachers in acquiring research skills. I think it's important that many of my respondents said that they would conduct research given the time, training and/or access within the school building. Several even mentioned that they would like to have an in-service dealing with this issue. Expecting teachers to spend their own time to gain such familiarity with research systems may be unrealistic given the other demands on their time. Time is a critical factor as searches are extremely time-consuming.

After all, teachers are the first-line observers of the educational process. Just imagine the additions to the educational research literature which might occur if they were properly trained as researchers.

The list of features I think might have added meaning to this study is exhaustive and includes, but is not limited to, the following: correlations between salary and amount of personal funds teachers spent (i.e., what percentage of their disposable income teachers spent for classroom resources); correlations between years of teaching experience and money spent; and correlations between grade taught and money spent. It might also have been instructive to discover exactly what classroom resources teachers feel they need in order to operate effectively and to find out whether teachers exhausted monies available through their school system before spending their personal funds for classroom resources.

The most encouraging aspect of this study is my discovery that, if teachers choose to conduct their own search for classroom materials, there are myriad resources available to them free or at low cost.

The best news for students and schools is that, even given the demands on their time and their low rate of pay, most teachers are neither reluctant to identify and obtain human resources to complement and enhance their teaching effectiveness nor hesitant to spend their personal funds on classroom resources.

One teacher reports being a scavenger and collector of old or soon-to-be-discarded household items. Another teacher's strategy is to "use" everybody, especially her students' parents, in the classroom as speakers and/or helpers. If items are not available from home and a "human resource" won't fit the bill, teachers might conduct their own search by scouring the available literature for free and low-cost resources. I hope this document might aid a teacher planning to embark on such a search, as teachers who are willing to spend the time to identify and obtain additional resources for their classrooms should be valued, assisted and encouraged. Like the teacher who confided that she works a second job to provide money for classroom resources, teachers who spend their personal funds on classroom resources provide an invaluable service to our students by their commitment to teaching

as evidenced by their willingness to "put their money where their mouths are". One such teacher reported that,

> I know that I spend too much of my own personal money on supplies. However, I feel that the things that I purchase make teaching complete and make me more comfortable with teaching. My school system and principal are good about purchasing materials for the room such as Big Books, sunshine books, math manipulatives and more. However, it's those little extras that I buy, that I do feel make my job more enjoyable and more valuable for the students.

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FOOTNOTES

[1]School systems, often the last to receive money through the budget process are unfortunately often the first to absorb budget cuts. For example, the Fairfax County School system, touted to be the best in the country, is absorbing a $25 million budget reduction to try to alleviate a projected $90 million County budget shortfall in the coming year.

[2]Educational Resource Information Center. ERIC contains listings of journal articles, reports, etc.

[3]Virginia On-Line. VIRGO includes four databases: VCAT, catalogs and books; WILS, nine indexes updated monthly, including humanities and business periodicals; CART, articles with abstracts; and CCON, tables of contents of journals in clinical medicine, life science, engineering, etc.

[4]I developed a resource card (Appendix B) which I always carry when conducting research. In addition, a resource card developed by Renzulli and Reis appears in Appendix C.

APPENDIX A

FREE TEACHER RESOURCES QUESTIONNAIRE

AVAILABILITY OF FUNDS/RESOURCES

1. Does the school system provide *all* the resources you use in your classroom?

2. The resources provided by my school system are sufficient to meet **(some/all/most/none)** of the school system's expectations of me as a teacher. **(circle one)**

3. The resources provided by my school system are sufficient for me to attain **(some/all/most/none)** of my personal educational objectives. **(circle one)**

4. Do you spend any of your personal funds to provide resources for your classroom?

5. How much of your personal funds would you estimate you spent last year to provide resources for your classroom (supplies & equipment, monetary or human resources)?

6. Is this **(more/less)** than you usually spend of your personal funds each school year? **(circle one)**

RESEARCH PROCESS

1. Have you ever conducted your own search for free educational resources?

2. How confident are you in your ability to locate resources through library research? **(circle one)**

   very confident **moderately confident** **not at all confident**

3. Have you ever used ERIC?

4. Have you ever used VIRGO?

5. How comfortable are you in using computerized research tools? **(circle one)**

   very comfortable **moderately comfortable** **not at all comfortable**

6. What would make you more comfortable in conducting your own research/using computerized library resources?

Form continues

RESOURCE SOURCES

1. How do you most frequently obtain extra resources for your classroom (e.g., purchase, journals, borrowing, etc.)?

2. Where would you begin a search for information about free or low-cost resources (i.e., where do you go after identifying a needed resource that is not supplied by the school system)?

3. What are some of the resources you've obtained for your classroom through means other than purchase (e.g., by borrowing, etc.)?

4. Have you arranged for visitors or speakers to come to your classroom? If so, list a few and give their affiliation.

Visitor	Affiliation	Subject

5. What are some of the items you have obtained free for your classroom?

Item	Source

6. What items have you purchased for your classroom with your personal funds? (e.g., supplies, snacks)

7. Which of the above items do you purchase with your own funds on a regular basis?

APPENDIX B

Sample Research/Reference Card

AGES/GRADES:	KEY WORDS/CROSS REFERENCES:
AUTHOR:	DATE:
ILLUSTRATOR:	
TITLE:	
CITY/PUBLISHER:	
NOTES/SUMMARY:	
OTHER BOOKS BY AUTHOR/ILLUSTRATOR:	

Action Form 5a
RESOURCE DIRECTORY CARD
Resource Persons

Card Number _____

Topic _____

NAME.

TOPIC.

ADDRESS.

PHONE.

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Action Form 5b
RESOURCE DIRECTORY CARD
Other Resources

Topic _____

TITLE.

MODE OF DELIVERY:

ADDRESS/CONTACT PERSON:

PHONE.

NOTES.
- Availability:
- Cost:

CONTACTS MADE:

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APPENDIX D

Free Classroom Resources
A Comprehensive Listing By Subject Matter

Directories

- Educators Index of Free Materials
- Educators Grade Guide to Free Teaching Aids
- Educators Guide to Free Audio and Video Materials
- Educators Guide to Free Films
- Educators Guide to Free Filmstrips and Slides
- Educators Guide to Free Guidance Materials
- Educators Guide to Free Health, Physical Education and Recreation Materials
- Educators Guide to Free Science Materials
- Educators Guide to Free Social Studies Materials
- Elementary Teachers Guide to Free Curriculum Materials
- Free and Inexpensive Learning Materials
- Free Stuff for Kids

Art

- Clip Art: Suggestions for Use and a Guide to Sources

Economics

- Bibliography of Free & Inexpensive Materials for Economic Education, K-12
- Guide to Free and Inexpensive Economic Educational Materials
- Energy and Economics for the Senior High Grades
- Energy and Economics for the Elementary Grades
- Energy and Economics for the Middle Grades

Foreign Language

- French as a Second Language: Supplementary Learning Resources
- Where's the Video--A Review of Resources for Foreign Languages

General

- A Cornucopia of Free or Inexpensive Materials
- Alternative Energy: A Guide to Free Information for Educators
- Sourcebook of Teaching Aids . . . Mostly Free: Posters and Pamphlets for Educators
- Help for the Truly Needy: The Utilization of Limited Resources by Secondary Teachers
- Activities and Resources for Guiding Young Children's Learning

List continues

Geography

Helping Your Child Learn Geography
Choosing to Teach Relationships: Economic Geography and the Local Community

Gifted

Gifted Education Resources: A Bibliography

Guidance

A Guide to Employability Skills Materials
Missouri Career Education, Career Resource Center Bibliography
Career Resource Center: Overview
Sex Equity Resources for Idaho Schools

Health

Help in Fighting the War against Drugs
Index of Free and Inexpensive Food and Nutrition Information Materials
HAPPIER: Health Resource Guide
Health and Safety Resources for Child Care Workers
You Can Help Prevent Alcohol and Other Drug Use among Secondary School Students

Integrated

Growing: Pre-Kindergarten Through 2nd Grade
Using Free Time: USMES Teacher Resource Book

Library

Directory of Library Instruction Materials in Pennsylvania Libraries
Georgia Mediagraphy and First Supplement
A Library Media Guide for Vermont Schools

Mathematics

Conservation for Children

Multicultural

Black Americans and the Struggle for Excellence in Education
We Too Built America: Recovering the American Heritage of Three Ethnic/Minority Groups in the Middle Georgia Area
Egypt: Beyond Pharaohs, Feluccas and Fellahin
Perspectives on Japan: A Guide for Teachers
Multiethnic/Multicultural Materials
Guide to Recommended Curriculum and Audio-Visual Materials for Teaching about Japan
Informational Publications on Native Americans

List continues

Refugee Materials Center Bibliography: Curricular and Supplementary Materials to Assist in the Education and Resettlement of Refugees and Immigrants
Asian Studies: A Catalogue of Asian Resources in Connecticut
A Collection of Reviews of Trade Books, Films, Recordings and Free Materials to Use in Teaching Young Children about Israel

Music

Folksong in the Classroom

Parental Involvement

What Students Need to Know

Science

A Resource Guide for Environmental and Marine Science Teachers
Utilizing Free and Inexpensive Materials: In the Science Classroom
Alternative Energy: A Guide to Free Information for Educators
Free Tips for Geology Trips
STS Science Education: Unifying the Goals of Science Education

Special Education

Library Resources for the Blind and Physically Handicapped
Heath Resource Directory

Social Studies

Social Studies for Academically Talented Students: Grades 6-8
Consumer Education Materials: An Annotated List
Teaching about Global Issues
Planet Patrol, An Educational Unit on Solid Waste Solutions for Grades 4-6
Resources for Teaching Virginia Government
Foods from an Iowa Farm
An Annotated Listing of Free and Inexpensive Materials for Teaching about Illinois

Vocational Education

Instructional Materials for Vocational and Technical Education and Training Programs: A Resource Handbook

APPENDIX E

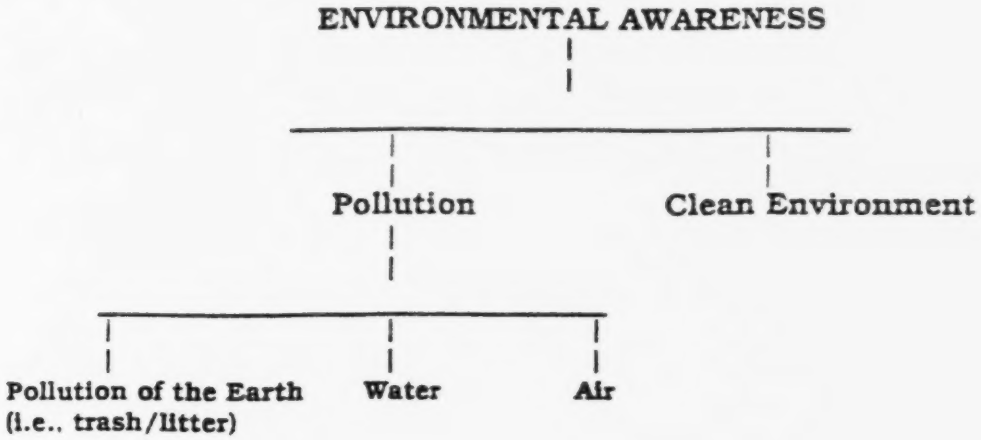
Integrated Mini Unit Plan on Pollution/Environment
(Enhanced by Free Thematic Resources)*

CONCEPT ATTAINMENT

OBJECTIVES

1. Students will recall from memory and recite orally or write the definition of pollution.
2. Students will be able to recall from memory and describe orally or in writing some of the types of pollution.
3. Students will be able to identify, when requested, examples of pollution in their environments.
4. Students will be able to classify examples of pollution as to type.
5. Students will be able to describe orally or in writing possible solutions to the problem of pollution.
6. Students will describe examples/types of "good litter."
7. Students will obtain data and create a graph depicting their families' trash disposal over the course of a week.

CONCEPT HIERARCHY



*The listings and summaries recorded herein were excerpted from the following publications: *Free and Inexpensive Learning Materials, Educators Index of Free Materials, Educators Guide to Free Social Studies Materials, and Educators Grade Guide to Free Teaching Aids.*

Plan continues

SUBJECT AREA OBJECTIVES MET BY THIS LESSON PLAN

This lesson plan was prepared for use with a sixth grade class and attempts to meet the following subject area objectives:

Social Studies[1]

Objective 6.3. The student will identify major changes in a society and determine the causes and effects of these changes. These changes will include the following categories: historical, economic, **environmental (pollution)** . . .

Objective 6.6. The student will identify world problems and suggest possible solutions, and consequences. Students will be given a situation in which they must **identify a world problem, suggest possible solutions,** and predict their consequences before making a final decision.

In addition, this lesson plan requires that students employ the following social studies skills:

- Make and interpret charts/graphs . . .
- Organize, analyze, synthesize information obtained from graphic data
- Gather, categorize, and interpret information from a variety of . . . sources
- Identify and analyze problems and suggest solutions
- Draw conclusions and make generalizations about data
- Make inferences and predictions based on data

Science[2]

Objective 6.20. The student will explain positive and negative effects of man's interaction with the environment. Investigation may include such conditions as acid rain, flooding, **water pollution and air pollution.**

Science process skills addressed in this lesson plan include observation, classification, data collection, predicting and correction of misconceptions (e.g., regarding "good litter").

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[1]Standards of Learning Objectives for Virginia Public Schools/Social Studies (January, 1983). Richmond, VA: Commonwealth of Virginia, Department of Education.

[2]Standards of Learning Objectives for Virginia Public Schools/Science (January, 1983). Richmond, VA: Commonwealth of Virginia, Department of Education.

Plan continues

Mathematics[3]

In the latest edition of the NCTM Standards for grades 5 through 8, the following skills which are incorporated in this lesson plan are slated to receive increased attention:

- Problem solving: representing situations verbally, numerically, **graphically** . . .
- Connections: connecting math to other subjects and to the world outside the classroom
- Patterns and functions: developing and using tables, **graphs** . . . to describe situations

Mathematics skills addressed in this lesson plan include counting, graphing, predicting, problem solving and estimation.

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[3]NCTM Standards (1989). Reston, VA: National Council of Teachers of Mathematics.

SUGGESTED SEQUENCE OF LEARNING

This lesson might be taught in several stages:

Stage 1. Reading and discussing *Just a Dream*.

Stage 2. Concept attainment lesson on pollution.

Stage 3. Walking tour to gather information.

Stage 4. Debriefing and discussion of walking tour.

Stage 5. Independent data collection and discussion thereof.

NOTES REGARDING ACTIVITIES

As a graphing activity, Math Activity #1 incorporates science, social studies and mathematics process skills.

Because of increased media attention focused on the harmful effects of pollution, some students may mistakenly believe that all litter is harmful to the environment. Science Experiment #1 seeks to correct any misconceptions students may have as to the sometimes beneficial effects of pollution (i.e., litter).

Also included in this lesson plan is a pollution-related science activity which may be used with visually impaired students.

Plan continues

CONCEPT ANALYSIS -- DEFINITION

Pollution is man-produced waste that lowers the quality of land, water and air.

Polluted is that which is made unclean or impure, contaminated.

To ***pollute*** is to make foul or unclean.

EXAMPLES	*NON-EXAMPLES*
Saddam Hussein releases oil into Persian Gulf.	Saddam Hussein refuses to withdraw from Kuwait.
Exxon Valdez spills oil off Canadian coast.	Several oil tankers guarded off the Canadian coast.
Litter spoils beauty of park.	Park closed.
Detergent foams in waters adjacent to sewage treatment plant.	Sewage treatment plant processes record-setting amount of waste.
Chemical plant spews wastes into air.	Chemical plant closes.

MATERIALS

Chalkboard and chalk
Overhead projector
Grease pencils
Transparencies: Examples/Non-Examples, Definitions, Evaluation, Blank (to record possible solutions to different types of pollution, Graph Your Trash, Activity Sheets, Science Experiment #1
Handouts: Evaluation, Graph Your Trash, Activity Sheets, Science Experiment #1

Begin by reading the book, *Just a Dream* (see book synopsis below). Lead a discussion about the book's message. For example, ask students whose responsibility it is to protect the environment. (N.B. This part of the lesson might also be used to inculcate a value: i.e., that it is everyone's responsibility to protect our environment. If the lesson is to be used to inculcate this value, there must be repeated emphasis of the value during the discussion which follows the reading of the book.)

BOOK SYNOPSIS: When he has a dream about a future earth devastated by pollution, Walter begins to understand the importance of taking care of the environment.[4]

[4]Van Allsburg, C. (1990). *Just a Dream*. Boston: Houghton Mifflin.

PROCEDURES

Introduction - Phase I

Give students an overview of the activity, explaining our respective roles. For example, "Remember last week when we identified a world problem and brainstormed solutions? Well, today, we are going to do the same thing, except you must first guess what the world problem is that we are going to discuss. This unit will cover several lessons all dealing with this world problem and will require you to read, write and research."

Presentation of Examples - Phase I, cont'd

1. Present first example and non-example.
2. Ask for suggestions as to what the world problem might be.
3. Write students' answers on the chalkboard.
4. Whether or not students guess the problem, present the next set of examples and non-examples, adding these to the list on the board.
5. Ask if students wish to change their minds about what the problem is. Draw a line through any suggestions that are unanimously agreed not to fit the latest examples.
6. If students wish to guess again what the problem is, let them.

Phase II - Analysis of Characteristics/Closure

1. Check to see whether all the suggestions fit the concept they've suggested.
2. If so, and if students have correctly guessed the concept, ask for volunteers to recite a definition.
3. Put all suggestions of a definition on the board. If they are consistent with the official definition being used, refine the definition and let students know this is our working definition of pollution. Give students, also, definitions of "pollute" and "pollutant."
4. Ask students what are some sources of pollution we did not deal with today. If they don't list them, let students know that a future lesson in this unit will deal with acid rain and destruction of the ozone layer.

Plan continues

Phase III - Application

Show students pictures, only some of which show examples of pollution. Have them classify them as to whether or not they depict a polluting situation.

Show students examples of water, air and land pollution. Lead a discussion during which students can brainstorm causes of and solutions to the problem of pollution.

Evaluation

See page 6, below.

Plan continues

Activities

1. Before beginning the walking tour of the neighborhood, ask students what types of pollution they expect to find during the tour. Ask if they expect to observe more of a particular type of pollution. If so, which type? (Science: Predicting)

   Take students on a walking tour of their neighborhood. Have them observe and record all examples of pollution they encounter. (Science: Observing and Data Collecting/Research)

   Have students count the number of instances of pollution they observed and compare this to their estimates. (Math: Counting; Science: Comparing)

   Have students classify the examples of pollution they observed as to type (air, water, etc.). (Science: Classifying)

   Have students write a possible solution to correct each instance of pollution observed. (Social Studies: Suggesting solutions to world problems)

2. Have students complete Math Exercise #1--Graph your Trash. (Math/Social Studies: Graphing; Science: Data Collecting/Research)

Have students complete #3 or #4, below:

3. Write to at least one agency which deals with keeping the environment clean (Environmental Protection Agency, Sierra Club, Citizens for Albemarle, CART-Charlottesville-Albemarle Recycle Together, etc.) and either (a) request information or (b) request that a speaker come and talk to the class about pollution solutions. THIS IS A COOPERATIVE ACTIVITY WHICH **MUST** BE COORDINATED WITH OTHER CLASS GROUPS. (Social Studies)

4. Create an "Action Plan" to present to the City Council to combat the types of pollution you observed in the neighborhood. Be specific in your Plan as to just what you observed. THIS IS A COOPERATIVE ACTIVITY. (Social Studies)

5. Have groups of students work cooperatively to conduct Science Experiment #1.

Plan continues

EVALUATION

PART I: *Multiple choice. (2.5 points)*

Which of the following is **not** an example of pollution:

_____ a. a smog-covered city

_____ b. a stack of newspapers in your basement

_____ c. an oil spill

_____ d. a stream containing detergent

PART II: *In the matrix below, write examples of three types of pollution you observed during our walking tour of the neighborhood or that we have discussed during this unit. In the appropriate column, write at least one cause of and one solution to each of your examples of pollution. (45 points)*

TYPE OF POLLUTION	CAUSE	SOLUTION

PART III: True/False. *(2.5 points)*

_____ All pollution is bad for the environment.

PART IV: What is pollution? *(10 points)*

SCIENCE EXPERIMENT #1

Demonstrating that there is "good litter"[5]

Introduction: Litter is full of life. It contains so much stored energy and essential nutrients that countless organisms use it for food. These organisms--bacteria, fungi, worms, insects and many others--are called decomposers because they reduce litter to ever smaller pieces that mix with the soil where nutrients are taken up and reused by plants. This is one way nature recycles litter.

Farmers and gardeners have known for centuries that litter protects and enriches the soil. That's why litter, mulch, compost, etc. are so important to people who grow things.

By conducting the experiment below you can observe how good litter is. Try this:

Rake up a pile of leaf or grass litter.

Examine the litter and the soil underneath; record their appearance, feel and smell; note presence of any organisms; measure pile height.

Let your litter stand and record changes as they occur.

Examine both litter and soil underneath.

Finally, take some decomposed litter from the bottom of your pile, mix it with sand and grow plants in it.

Grow more plants of the same kind in pure sand.

Water both groups equally.

Compare.

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[5]Virginia Department of Forestry. Forestry Activity #6.

OPTIONAL SCIENCE EXPERIMENT

How can blind students "see" and compare polluted water?[6]

Materials	4 jars of water containing different pollutants, light sensor (available on Federal Quota from the American Printing House for the Blind, P.O. Box 6085, Louisville, KY 40206), light source (sunlight, filmstrip projector, and so on).
Opening Question	How can we (blind students) find out (by using our hearing) which jars contain the most polluted water?
Some Possible Activities	Prepare four jars of water with varying amounts of pollutants (soil, debris, egg shells, and so on). Introduce and demonstrate to the students the **light sensor device**. This device produces an *auditory* signal of varying pitch and volume as a result of its exposure to the intensity of light. Set up the four jars of varying pollutants with a light source behind it in this way. Have students examine each jar at close range by pointing the light sensor directly at each jar, as shown above. A beeping sound is emitted, which becomes higher and more frequent with the greater amount of light coming into the sensor. Students will discover that the fewer pollutants in each jar, the greater amount of light coming through the jar to the sensor and a slower and lower pitched beep. *Note*: For an excellent expanded description of the use of the light sensor with blind students, see Frank L. Franks and LaRhea Sanford, "Using the Light Sensor to Introduce Laboratory Science," *Science and Children* 13, no. 6 (March 1976): 48-49.

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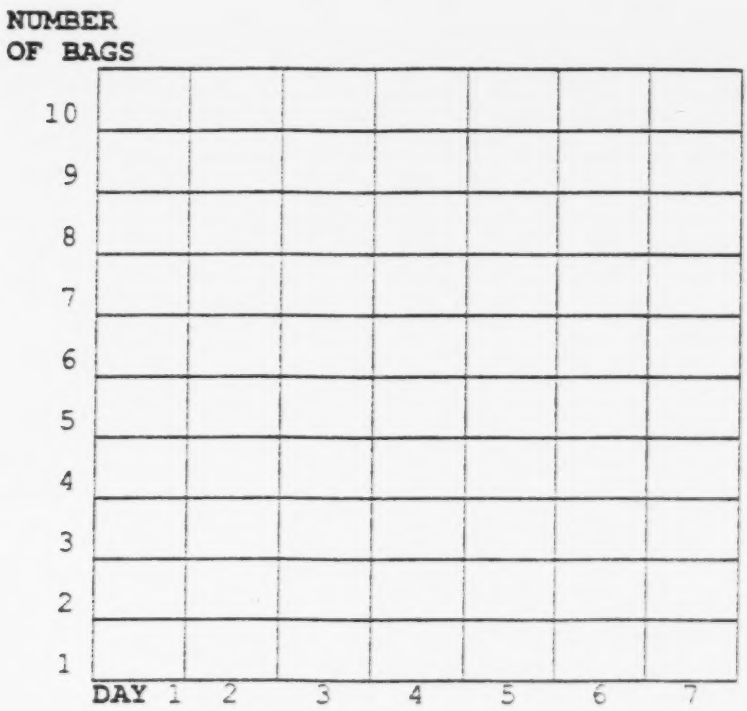
[6]Carin & Sund (1989). *Teaching Science Through Discovery*. (6th Ed.) Merrill Publishing Co. p. 498.

Plan continues

MATH EXERCISE #1

GRAPH YOUR TRASH

Directions: *(a) Before beginning this experiment, predict how many bags of trash your family disposes of in a week: (Science: Predicting) (b) On the graph below, plot the number of bags of trash your family throws away in a seven day period. Begin on a Monday. Please answer the questions below.*



1. Estimate the weight of the trash your family disposed of during the week of your observation. (Math: Estimating)

2. Classify this trash according to type (e.g., food wastes, newspapers, cans, bottles, plastic containers, etc.). What main categories would you say your family's trash fit into? (Science: Classifying)

3. Compare your graph to the graphs of at least two of your classmates. Try to use classmates who live in neighborhoods where trash is picked up on a different day than in your neighborhood. (Science: Comparing)

4. What similarities do you notice in the graphs (e.g., size of trashbags, total number of bags of trash thrown away, more trash thrown out on a particular day)? (Science: Interpreting data)

5. How well did you predict the number of bags of trash your family disposed of in a week? What was your prediction? _____ bags What was the actual number? _____ bags

Plan continues

OPTIONAL MATH EXERCISE[7]

Logical Reasoning

Reva, Bette, Tami & Lesha have all decided to research different environmental issues: water pollution, litter, recycling and air pollution. One of Reva's classmates in the group prefers to research litter. Tami and Lesha do not wish to research recycling. Bette's research topic is water pollution. Lesha had planned to research air pollution, but has changed her topic. What is Lesha's research topic?

ANSWER

Discussion of solution

Enter all known information into the chart.
E.g., since Bette's topic is water pollution, we can write "no" in Bette's column for every other topic.
Now we see that Reva is the only possible person to have recycling as her topic.
Eliminating recycling, air and water pollution as Lesha's topic, we reveal that her topic can only be litter.

	REVA	BETTE	TAMI	LESHA
Air pollution	no	no	yes	no
Litter	no	no		yes
Water pollution	no	yes	no	
Recycling	yes	no	no	no

[7]Adapted from O'Daffer, P.G. (editor). (1988). Problem solving tips for teachers. Reston, VA: National Council of Teachers of Mathematics, Inc.

Plan continues

ADDITIONAL SOURCES

Bauer, H. (1959). *Water: Riches or Ruin.* Garden City, NY: Doubleday & Company, Inc.

Leaf, M. (1971). *Who Cares? I Do.* Philadelphia, PA: J.B. Lippincott Company.

MacEachern, D. (1990). *Save Our Planet: 750 Everyday Ways You Can Help Clean up the Earth.* New York: Dell Publishing.

Marzani, C. (1972). *The Wounded Earth: An Environmental Survey.* Reading, MA: Young Scott Books.

Pringle, L. (1989). *The Only Earth We Have.* London: The MacMillan Company.

Pringle, L. (1981). *What Shall We Do With The Land?* New York: Thomas Y. Crowell.

Rathje, W.L. *Once and Future Landfills.* National Geographic (May 1991), pp. 117-134.

Simon, S. (1972). *Science Projects in Pollution.* New York: Holiday House.

Stille, D. (1990). *Water Pollution.* Chicago: Children's Press.

ART/CAREERS

Jobs for the Future

Today the jobs of most working women are essential to the support of themselves and their families. To guide women toward rewarding occupations and information about them, this publication suggests factors to consider when exploring and researching those jobs areas that interest them. Available free from U.S. Department of Labor, Women's Bureau.

Exploring Careers in Agronomy, Crops, and Soils

This booklet describes careers in agronomy, crop science, and soil science, as well as educational routes to these careers. Classroom quantities available free from American Society of Agronomy.

Art to Zoo

Explains how teachers can use local resources (including museums) with their own students. Two copies available free from Smithsonian Institution, Office of Elementary and Secondary Education.

INTEGRATED

Suggestions for Incorporating Forestry into the School Curriculum

Recommends natural resource related topics that can be interdisciplinary in content. Each school level receives an individualized list of topics appropriate to that age group. Single copies available free from U.S. Department of Agriculture, Forest Service.

The World Around You--The Environmental Education Packet

This packet emphasizing the importance of water and water conservation, is targeted to reach children in grades 3 to 6. It not only covers water conservation, but vocabulary, science, reading comprehension, grammar and hands-on activities as well. Includes three activity sheets and a teacher's guide. One packet available free from The Garden Club of America.

Racing in the Classroom

This outline includes ideas on how to use the theme of racing to teach children about art, computer science, geography, mathematics, physical education, reading, writing, and science. Reasonable quantities available from Charlotte Motor Speedway.

MATHEMATICS

More than 1, 2, 3--The Real Basics of Mathematics

We have seen that children learn the real basics of thinking about mathematics through personal experience and playful activities. With appropriate learning experiences from birth through the early elementary years, children will develop a lifelong interest in using mathematics. The real basics are much more than counting 1, 2, 3....! This brochure explains this. Single copies available free from National Association for the Education of Young Children.

Metric Conversion Factors

A chart to help convert English measurements to metric and vice versa. Punched for a three-ring binder, this chart will help you convert length, area, mass, volume, and temperature. Ten copies available free from National Institute of Standards and Technology.

Multiplication Tables

A handy card presenting the multiplication tables for quick reference. The front of the card also presents the Pledge of Allegiance while the reverse side gives the Preamble to the Constitution. Classroom quantities available free from American General Life and Accident Insurance Company.

Tree Rings: Timekeepers of the Past

Explains how past environmental conditions have been recorded in tree rings and how scientists interpret this information. Fifty copies available free from U.S. Geological Survey

Plan continues

SOCIAL STUDIES

Michael Recycle Comic Book

Presents "Michael Recycle," a conservationist whose job is to teach kids not to throw away things that can be used again. It takes three children on a trip through a recycling center and demonstrates that recycling can be profitable to all people involved. Single copies or classroom quantities available free from Reynolds Metals Company.

Readings in Overpopulation

Examines the various impacts of continued population growth. Includes traffic congestion, loss of forests and wildlife, the garbage crisis, global warming and food shortages. Single copies available free from Zero Population Growth, Inc.

Global Report 1989/90

Discusses the relationship of the environment and disasters to international development. Aimed at helping teachers explore the global citizenship responsibilities among their young people. Single copies available free from The Canadian Red Cross.

Charlie Brown Clears the Air

Charlie Brown and friends express their concern about pollution. Available free from U.S. Environmental Protection Agency.

Meecology

Available through McDonald's Corporation, this 16 mm. film shows children ages 6 to 12 how to become personally involved in improving the environment at home and in the community. Includes teacher discussion kit.

Believing in the Environment
Environment and Development: A Creative Challenge

Present ideas of leading thinkers in all fields whose views on current problems reflect the energy of goodwill. Available free from World Goodwill.

Recycling Cartoon: The Environmental Closed Loop

This show, in illustrated form, shows how the recycling loop between used cans and new cans is closed. Available free from Aluminum Company of America.

Plan continues

Recycling: It's Nature's Way

Discusses aluminum can recycling as an energy saver, environment protector, and a supporter of charities. Available free from Aluminum Company of America.

Careers in the Renewable Energy and Conservation Professions and Trades

Covers such topics as solar energy, wind energy, geothermal energy, and energy conservation. Single copies available free from Conservable and Renewable Energy Inquiry and Referral Service.

Energy Conservation Experiments You Can Do . . . From Edison

Contains directions for simple experiments which can be performed by students with minimal supervision and at little cost. Classroom quantities available free from Edison Electric Institute.

SCIENCE

Acid Rain: The Facts for Michigan
Ecology Primer
Habitat

Covers a range of topics concerning our environment. Some pertain only to Michigan while others are more general in nature. Available free from Michigan United Conservation Clubs.

Kid's Guide to Protecting the Planet

This flyer, partially in comic book format, presents many ideas which youth can implement to save energy and promote conservation. Up to 25 copies available free from Natural Resources Defense Council.

Wetland Ecosystems
Wetlands are for Kids Too!
The Value of Wetlands

Two-page fact sheets providing brief summaries of wetlands and the different types found across the country. Explains why wetlands provide a vital and irreplaceable habitat for many types of plants and animals. Single copies available free from The Izaak Walton League of America, Inc.

Temperate Rain Forests

Contains information about temperate rain forests such as the one found within Olympic National Park in Washington. Single copies available free from Olympic National Park.

Air, the Rain, the Concern

Explores the incredible damage caused by air pollution and acid rain to our once pristine National Parks and discusses what we can do to save these beautiful scenic vistas. Single copies available free from Guadalupe Mountains National Park.

Water in the Urban Environment: Erosion and Sediment

Explores the dual role water plays as both a resource and a hazard and discusses possible actions that minimize erosion and sedimentation. Fifty copies available free from U.S. Geological Survey.

Plan continues

The Story of Drinking Water

Sixteen-page full-color booklet describing the water treatment and distribution of a public drinking water supply system and wise water use. Also available in Spanish and French, the booklets are accompanied by a packet of materials describing additional programs available for educating students about drinking water. Ten copies available free from American Water Works Association.

Solar Energy and You

Why is everyone interested in solar energy? The reason is that fuels we burn in our furnaces are very expensive, harmful to the environment, and the supply of thee fuels is shrinking every day. This article tells how solar energy works. Single copies available free from Careirs.

Sound and Noise

Twenty-four page primer on understanding how sound is generated and scientifically measured. Discusses when sound becomes noise and the contributions of motor vehicle manufacturers to help solve the community noise problem. Classroom quantities available free from Motor Vehicle Manufacturers Association.

The Hydrologic Cycle

Explains the natural process by which water is circulated from the seas to the atmosphere, to the land, and back to the seas in a continuous cycle. Fifty copies available free from the U.S. Geological Survey.

How Much Water in a 12-Ounce Can?

Provides information on how water was a free resource but now is considered an expensive commodity. Demonstrates how the ever-increasing use of water by industry and in the home is depleting existing supplies. Fifty copies available free from the U.S. Geological Survey.

Elementary and Middle School Science Project Ideas/Advanced Science Project Ideas

Lists 200 interesting and exciting scientific investigations that elementary and middle school students can undertake. Single copies available free from Applied Educational Technology.

Plan continues

Table 1

Tips for an Organized, Successful Search

- ❒ Clarify your research goal(s)
  - ➺ Decide what information or material you want to locate
  - ➺ List possible sources of information or material
  - ➺ Make list of key terms that describe desired material
- ❒ Arm yourself with necessary materials
  - ➺ Resource card for recording sources
  - ➺ 5 1/4" diskette to download ERIC searches
  - ➺ Notebook, pencils and pens
  - ➺ Copy card and change for making xerox and microfiche copies
- ❒ Choose a time when you have several hours free
  - ➺ Arrive at library as early as possible
- ❒ Know your library, its personnel and hours of operation
  - ➺ Introduce yourself to personnel
  - ➺ Request a tour if you're unfamiliar with the library
  - ➺ If necessary, inquire about ERIC and VIRGO training
- ❒ ERIC and VIRGO
  - ➺ Familiarize yourself with keyboard and basic search techniques
  - ➺ Use Thesauruses and Descriptors to choose search terms

☆☆☆ Begin your search ☆☆☆

Figure 1

Amount Spent on Classroom Resources
(Teachers' Personal Funds)

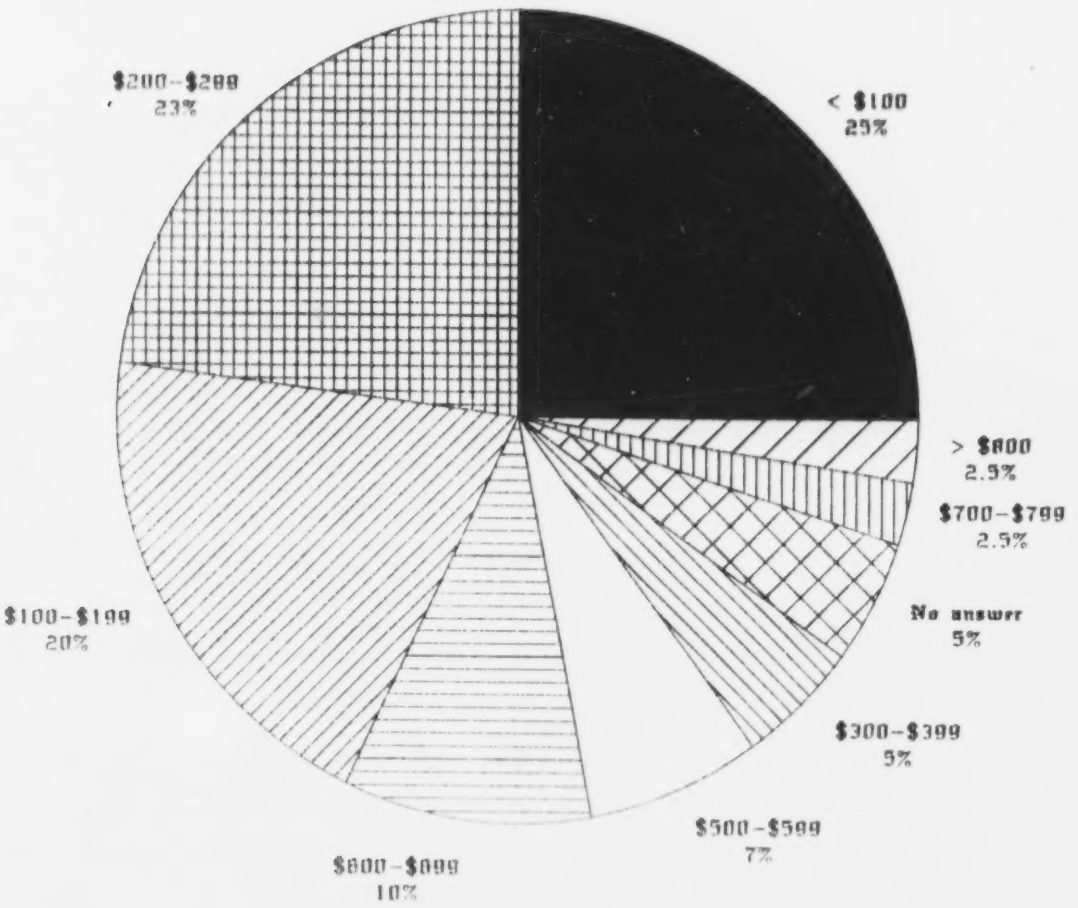


Figure 2

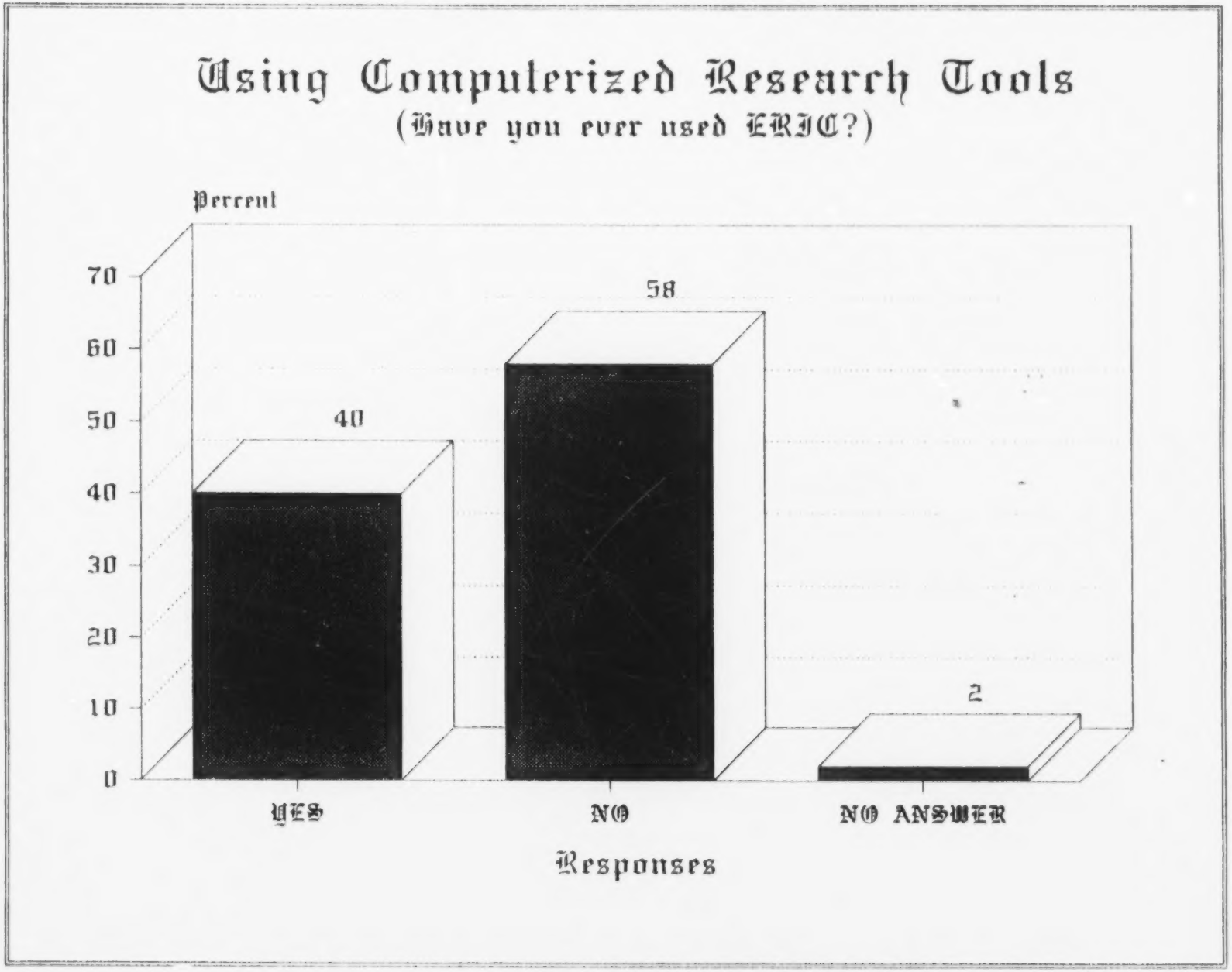

Using Compulerized Research Tools
(Have you ever used ERIC?)
Percent
70
60
50
40
30
20
10
0
40
58
2
YES
NO
NO ANSWER
Responses

Figure 3

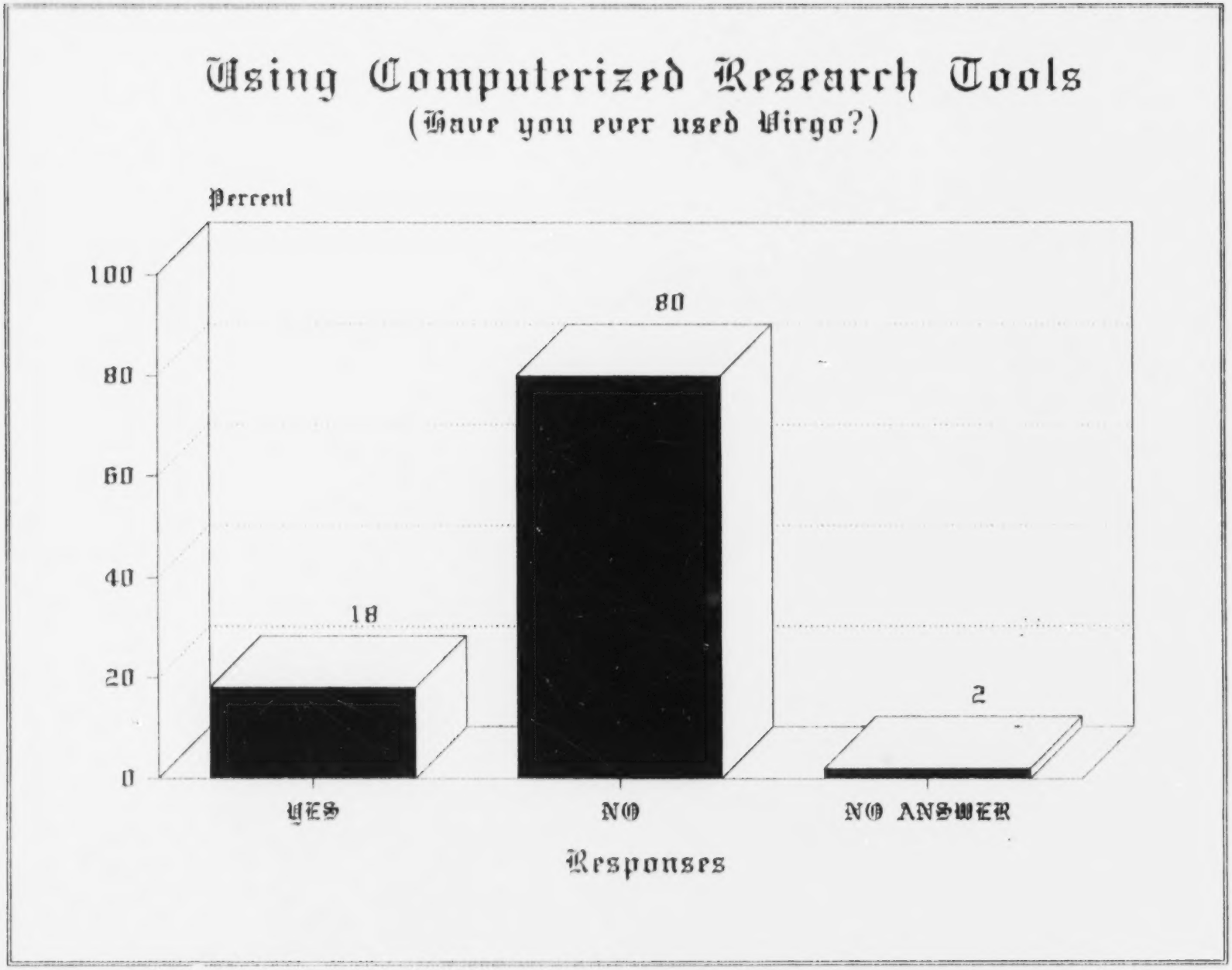
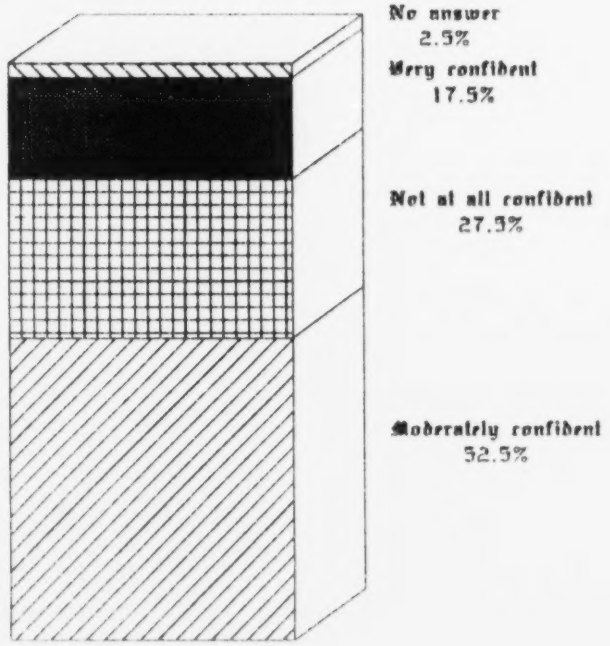

Using Computerized Research Tools
(Have you ever used Virgo?)
Percent
100
80
60
40
20
0
18
80
2
YES
NO
NO ANSWER
Responses

Figure 4

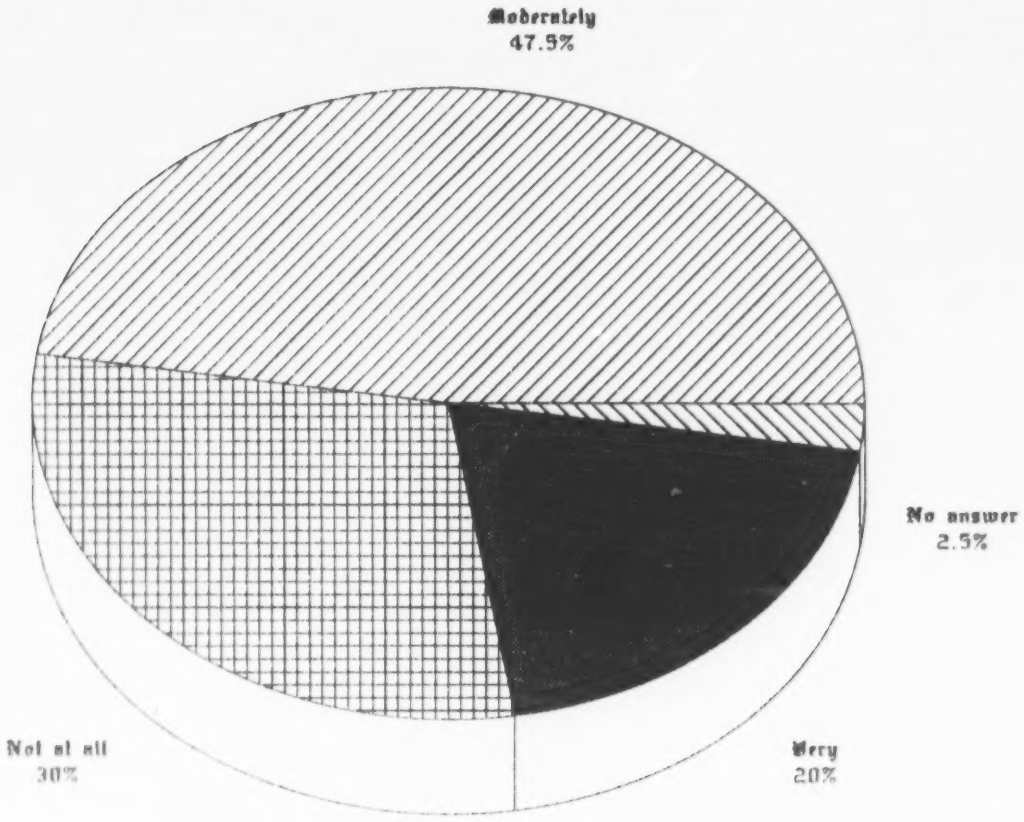
Locating Free Resources
(Teachers' Perceptions of Their Ability)



How confident are you in your ability?

Figure 5

Using Computerized Research Tools
(Teachers' Comfort Level)

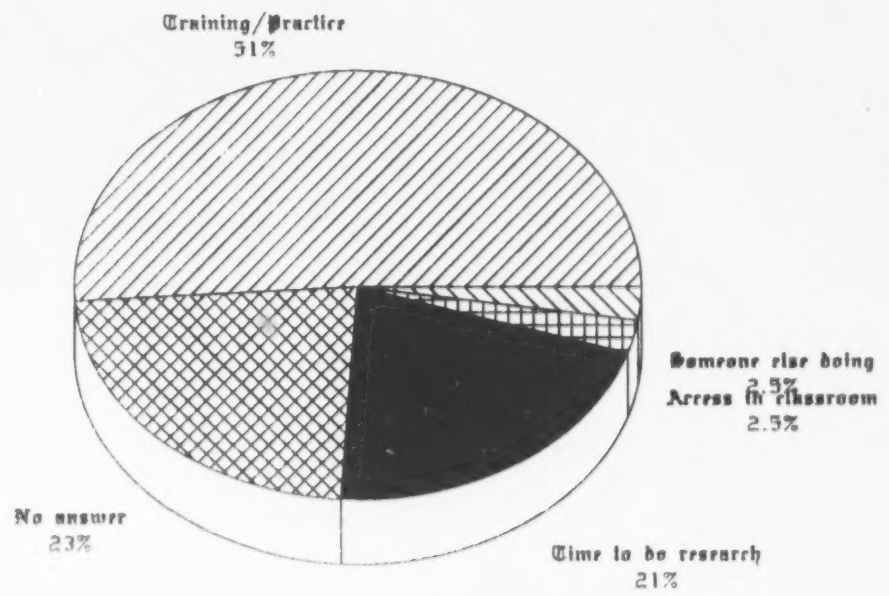


Question: How comfortable are you?

69

Figure 6

Conducting Resource Searches
(Making teachers more comfortable)

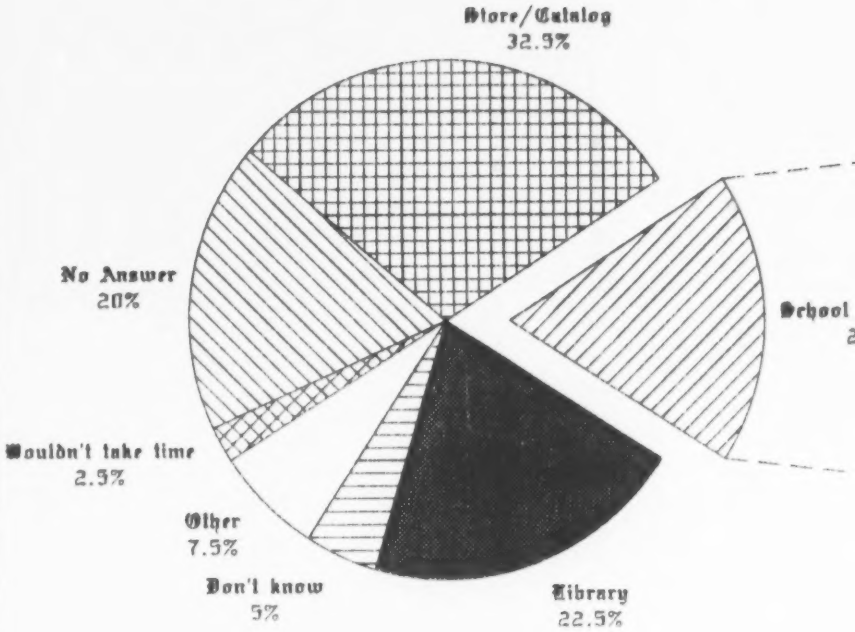


What would make you more inclined to do?

Figure

Conducting Resou

(Where would teachers b



gure 7

source Searches

ners begin a search?)

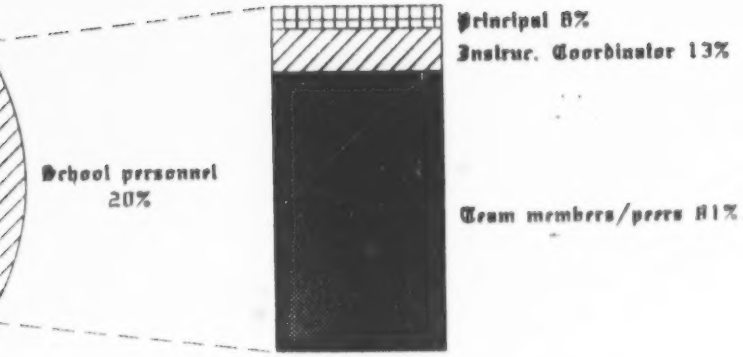


Figure 8

Obtaining Classroom Resources
(Strategies Teachers Use)

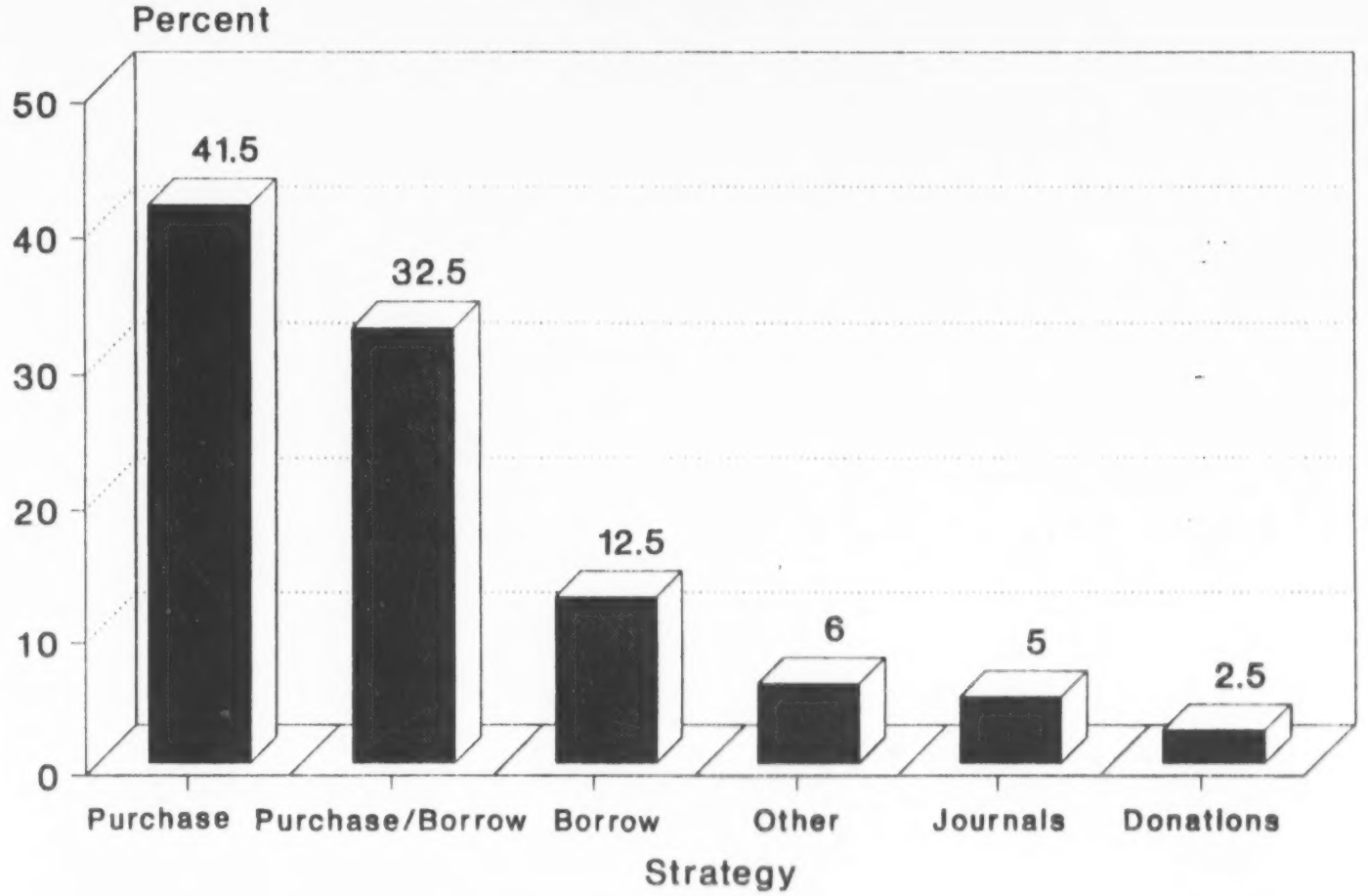


Figure 9
Classroom Resources Teachers Purchase